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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,502	10/15/2001	Steven E. Berkheimer	BER6209P0012US	1487

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EXAMINER

GODDARD, BRIAN D

ART UNIT PAPER NUMBER

2161

DATE MAILED: 12/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/977,502	Applicant(s) BERKHEIMER, STEVEN E.	
	Examiner Brian Goddard	Art Unit 2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 4-8, 10-19, 25 and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "substantial" in claim 4 is a relative term which renders the claim indefinite. The term "substantial redundancy" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. In the interest of compact prosecution, the examiner ignores the limitation "without substantial redundancy" in claim 4.

Claims 5-8 depend from claim 4, and therefore inherit this deficiency.

The term "minimal" in claim 10 is a relative term which renders the claim indefinite. The term "minimal redundancy" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. In the interest of compact prosecution, the examiner ignores the term "minimal" altogether.

Claims 11-19 depend from claim 10, and therefore inherit this deficiency.

The term "substantially non-redundant" in claim 25 is indefinite for the same reasons as the similar terms mentioned above. In the interest of compact prosecution, the examiner ignores the term "substantially" altogether.

Claim 28 depends from claim 25, and therefore inherits this deficiency.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-7, 9-10 and 12-19 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,671,353 to Tian et al.

Referring to claim 1, Tian discloses a method of archiving an item as claimed. See Figures 2-14 and the corresponding portions of Tian's specification for this disclosure. Tian teaches "a method of archiving an item [See Abstract, Background, Summary, and description of PACS] comprising:

presenting the item [DICOM message] to a parser [See Column 5, lines 38-58];

parsing the item into a plurality of multi-part object structures [IODs (See Column 5, lines 38-58 and Column 6, line 41 et seq.)] wherein portions of the structures have searchable information tags associated therewith [See Column 8, line 43 et seq. and Column 14, line 57 et seq.];

evaluating the object structures ['semantic validation'] in accordance with object structures previously stored [rules] in an archive [See Column 5, lines 38-58 and all of 'Operational Scenarios' section beginning in Column 11];

presenting an evaluated object structure for manual reconciliation [See Column 10, lines 25-29] at least where there is a predetermined variance between the object and at least one of a predetermined standard and a user defined rule [when a semantic warning is generated during validation]" as claimed.

Referring to claim 2, Tian teaches the method of claim 1, as above, wherein the respective structure can be manually edited [by the 'application developer'] after being presented for reconciliation [See Column 10, lines 25-29] as claimed.

Referring to claim 3, Tian teaches the method of claim 1, as above, which includes, before the parsing step, converting an input item [e.g. 'digitized medical imagery'] to a standardized format [DICOM message format] for input to the parser [See Summary of the Invention section] as claimed.

Referring to claim 4, Tian teaches the method of claim 1, as above, which includes storing a reconciled object structure in the archive [See e.g. final paragraph of Summary of the Invention] as claimed.

Referring to claim 5, Tian teaches the method of claim 4, as above, which includes selectively editing an object structure [e.g. to correct the structure from a warning], linked to other structures [via pointer or reference (See Columns 8-10)] to thereby effect a one-to-many change in a plurality of archived items [via inheritance (See 'Operational Scenarios')] as claimed.

Referring to claims 6 and 7, Tian teaches the method of claim 5, as above, which includes compiling an item or a plurality of items [generation of a DICOM message to transmit information to/from a PACS (See Summary and Column 4, line 58 – Column 5, line 5)] to be output from the archive...[See above] as claimed.

Referring to claim 9, Tian teaches the method of claim 1, as above, which includes forming object oriented data structures from the parsed items [See above] wherein the data structures include [See Column 4, lines 20-40] at least some of item properties [modules], item property values [attributes], element properties [elements (element descriptions)] and element property values [element values] as claimed.

Claim 10 is rejected on substantially the same basis as claims 1-7 above. See the discussions regarding claims 1-7 for the details of this disclosure. In particular, Tian teaches an object-oriented archival system [See Fig. 1] comprising a storage medium [PACS storage] and a set of executable instructions for establishing an archive...[See above] as claimed.

Claims 12-15 and 18 are rejected on substantially the same basis as claim 9, in light of the basis for claim 10 above. See the discussions regarding claims 1-7, 9 and 10 for the details of this disclosure.

Claims 16 and 17 are rejected on substantially the same basis as claim 5, in light of the basis for claim 15. See the discussions regarding claims 1-7, 9 and 10 above for the details of this disclosure.

Referring to claim 19, Tian teaches the method of claim 10, as above, wherein the output file [DICOM message] comprises...an input for an electronic network [input to another PACS system over a PACS network] as claimed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 8, 11 and 20-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tian in view of U.S. Patent No. 6,456,395 to Ringness.

Referring first to claim 20, Tian discloses a method of generating layers corresponding to separations in an object comprising:

establishing an archive [See Claims 1 and 10 above] populated with a plurality of object-type structures wherein a first plurality of the structures represents a first layer [e.g. IOD layer], wherein the members of the first plurality are linked to establish element definitions and locations, relative to one another, in the first layer [See above], and, at least a second plurality of the structures wherein the second plurality represents a second layer [e.g. block layer] wherein the members of the second plurality are linked to establish element definitions and locations [See above]... wherein the establishing step includes, analyzing the members of the first and second pluralities for common structures [See Claims 1-7 and 9 above]...as claimed.

Tian's structures and layers do not correspond to color separations for a printing process, wherein the first layer corresponds to a color separation for a multi-color output document and the second layer corresponds to a second color separation for the output document as claimed. However, Tian's documents [DICOM messages] are multi-color output documents in that they include digital medical images. This provides suggestion for generating layers in the structured environment to correspond to the colors in the document.

Ringness discloses a system and method similar to that of Tian, wherein object layers in a multi-color document corresponding to different color separations for the document are extracted for a printing process as claimed. See the Abstract, Summary, Figures 2-7 and the corresponding portions of Ringness' specification for this disclosure.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add Ringness' method for separating colors into separate object structures for each color layer to the method of Tian, so as to separate the colors within Tian's DICOM messages for archival purposes, to obtain the invention as claimed. One would have been motivated to do so because of Tian's suggestion as above, and to further meet Ringness' disclosed need (See Column 2, lines 49-54) for more efficient methods of generating object structures for printing purposes by expanding the method to other formats, such as the DICOM message used by the medical community, to make printing the medical information in the DICOM message more efficient.

Claims 21-23 are rejected on substantially the same basis as claim 1 above in light of the basis for claim 20. See the discussions regarding claims 1 and 20 for the details of this disclosure.

Claims 24-28 are rejected on substantially the same basis as claims 2-7, in light of the basis for claims 20-23. See the discussions regarding claims 1-7 and 20-23 above for the details of this disclosure.

Claims 8 and 11 are rejected on the same basis as claim 20, in light of the basis for claims 1 and 10 respectively. See the discussions regarding claims 1-7, 10 and 20 above for the details of this disclosure.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,889,932 to Adegeest et al. is considered particularly pertinent to applicant's claimed invention.

The remaining prior art of record is considered pertinent to applicant's disclosure, and/or portions of applicant's claimed invention.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Goddard whose telephone number is 571-272-4020. The examiner can normally be reached on M-F, 9 AM - 5 PM.

Art Unit: 2161

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 571-272-4023. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

bdg
02 December 2004


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